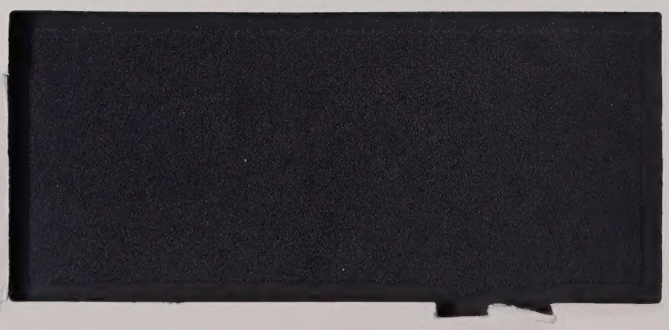
5200E TX

SCHEMATICS

tau-tron

A UNIT OF

GENERAL SIGNAL



5200E TX

SCHEMATICS

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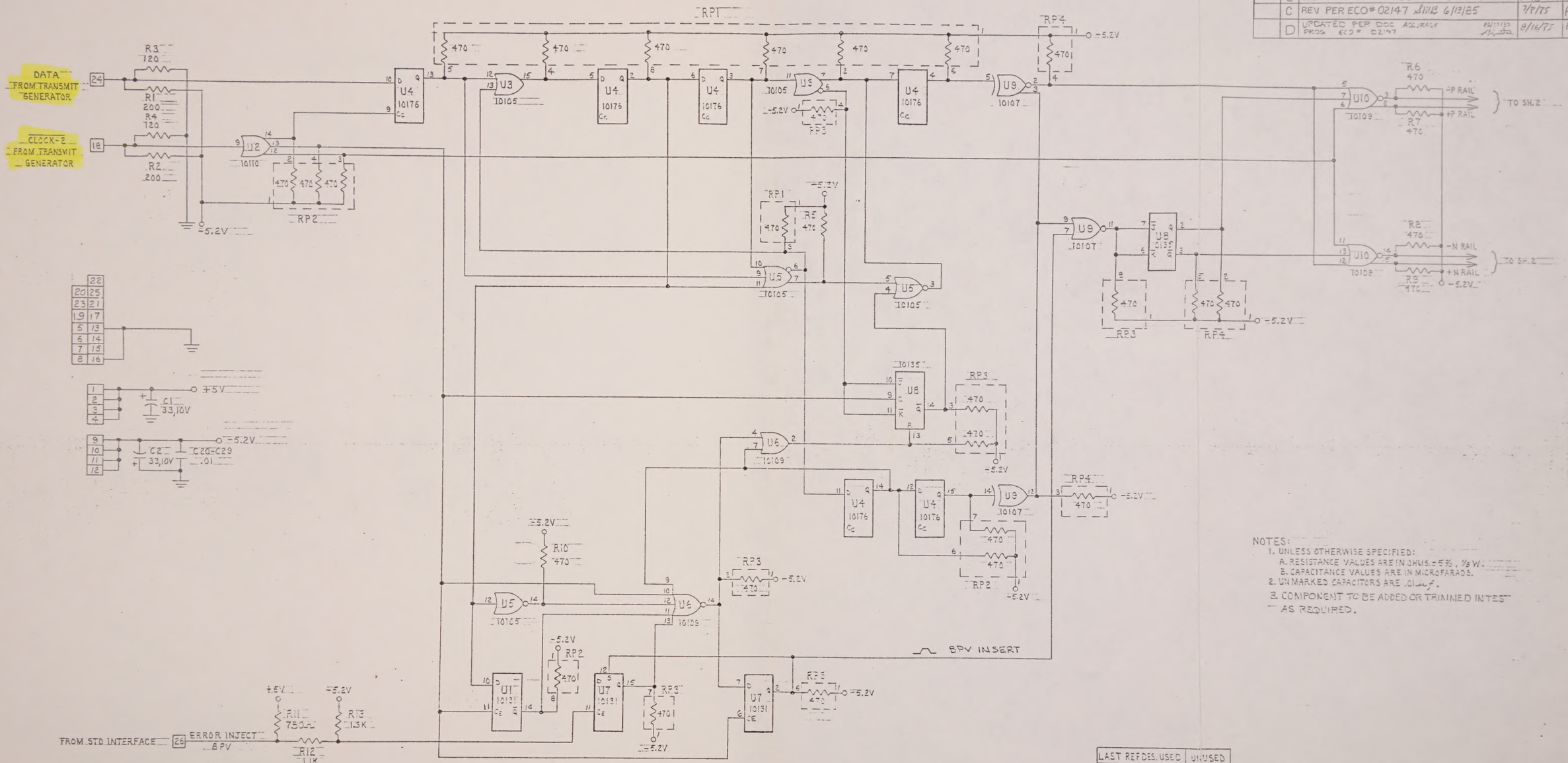
REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	I	REVISED PER PDC 00720 S.T. 9-15-80	9-18-80	DEA / JAC
	A	REVISED & RELEASED PER DCN 00784 S.T. 12-17-80	12-18-80	JAC / [illegible]
	B	REV PER DCN 00862 C.S. 3-16-81	3-18-81	JAC
	C	REV PER ECO# 02147 SIIIB 6/12/85	7/8/85	PK / [illegible]
	D	UPDATED PER PDC ACCURAY PROG ECO# 02197 [illegible]	8/16/85	PK / [illegible]



NOTES:
1. UNLESS OTHERWISE SPECIFIED:
   A. RESISTANCE VALUES ARE IN OHMS, ±5%, ⅛W.
   B. CAPACITANCE VALUES ARE IN MICROFARADS.
2. UNMARKED CAPACITORS ARE .01μf.
3. COMPONENT TO BE ADDED OR TRIMMED IN TEST AS REQUIRED.

LAST REF DES. USED	UNUSED
L2	
U12	CR3
RP4	Q15
R76	T2
C36	K3

REFERENCE DRAWINGS:
ASSEMBLY: D9545-7077
FABRICATION: D9605-7076

TDK- 57077	55200D XMTR
NEXT ASSY	USED ON
APPLICATION	

WHERE APPLICABLE: REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES: ANGLES ±
FRACTIONS ±
3 PLACE DECIMALS ±
2 PLACE DECIMALS ±
1 PLACE DECIMALS ±
MATERIAL:

CONTR NO:

DR C. Smith	1-3-80
CHK JP	9-7-80
APPD wcd	9-18-80

APPROVED
BY DIRECTION OF

tau-tron inc Chelmsford, Ma. 01824

DRAWING TITLE
SCHEMATIC
OUTPUT AMPLIFIER

SIZE	CODE IDENT NO.	DRAWING NO.	REV
D		57075	D

SCALE | 55200D TX | SHEET 1 OF 2

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REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
		SEE SHEET 1 — E.J. 9-1550	9-18-80	WEF.
		SEE SHEET 1 FOR REVISIONS		KAB

Output Level Control

DS3 OUTPUT

FROM SH. 1 — +P RAIL — -P RAIL — +N RAIL — -N RAIL — FROM SH. 1

Q1 2N3563 · Q2 2N3563 · Q3 2N3563 · Q4 2N3563 · Q5 2N3563 · Q6 2N3563

U12 72747

+Adj · -Adj · ± Gain

C4 · C35 10pf · C5 · T1 T1-1 · T2 T1-1

K1 · K2 · K3

R28 180 Low · R27 110 · R26 110

R29 150 DSX · L1 .56μH · R30 18 · 130Ω · R31 75 · R32 75 · SEE NOTE 3 · R33 39 · C6 100pf · R34 270

Hi

C7 .1 · R35 91 · C32 .01 · R36 20K · R37 510 · R39 33 · C33 .1 · R38 33 · C35 33 · L2 1000μh · -5.2V

Q8 BFR-90 · Q9 BFR-90 · Q7 BFR-90 · R41 22 · R45 22 · R42 51 · R43 200 · R44 51 · R46 200 · C9 .1 · C24 .1 · C10 .1 · C8 .1

+5V · R76 3.6K · R75 3.6K · R72 750

Q10 BFR-96 · Q11 BFR-96 · Q12 BFR-96 · Q13 BFR-96 · Q14 BFR-96 · Q15 BFR-96

R49 51 · R48 51 · R51 51 · R54 51 · R47 750 · R57 51 · R60 51 · R63 51 · C11 .1 · C12,.1 · C13,.1 · C14,.1 · C15,.1 · C16,.1 · C30 .1 · C31 .1 · R50,200 · R52,51 · R53,200 · R55,51 · R56,200 · R58,51 · R59,200 · R61,51 · R62,200 · R64,51 · R65,200 · R66 68 · R67 68 · R68 68 · R69 68 · R70 68 · R71 68

-5.2V

C18 · R23 820 · R22 500 · R21 100 · R74 820 · R19 33 · C17 · R25 150 · R24 150 · C19 · R18 33 · R20 100 · R16 82.5,1% · R17 82.5,1% · R73 10Ω · C3

STD. INTERFACE

53 LOW (H) · 55 DSX (H) · 54 HIGH (H)

7406 U11

K1 W117 DIF-9 (D2A05) · K2 W117 DIF-9 (D2A05) · K3 W117 DIF-9 (D2A05)

CR1 IN4148 · CR2 IN4148 · CR3 IN4148

13,2 · 6

WHERE APPLICABLE REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64.	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: ANGLES ± FRACTIONS ± 3 PLACE DECIMALS ± 2 PLACE DECIMALS ± 1 PLACE DECIMALS ± MATERIAL:
TDK-57077 · 55200D XMTR NEXT ASSY · USED ON APPLICATION	

CONTR NO.	
DR C. Smith	4-3-80
CHK [illegible]	4-7-80
APPD wef	9-18-80
APPROVED	
BY DIRECTION OF	

tau-tron inc Chelmsford, Ma. 01824

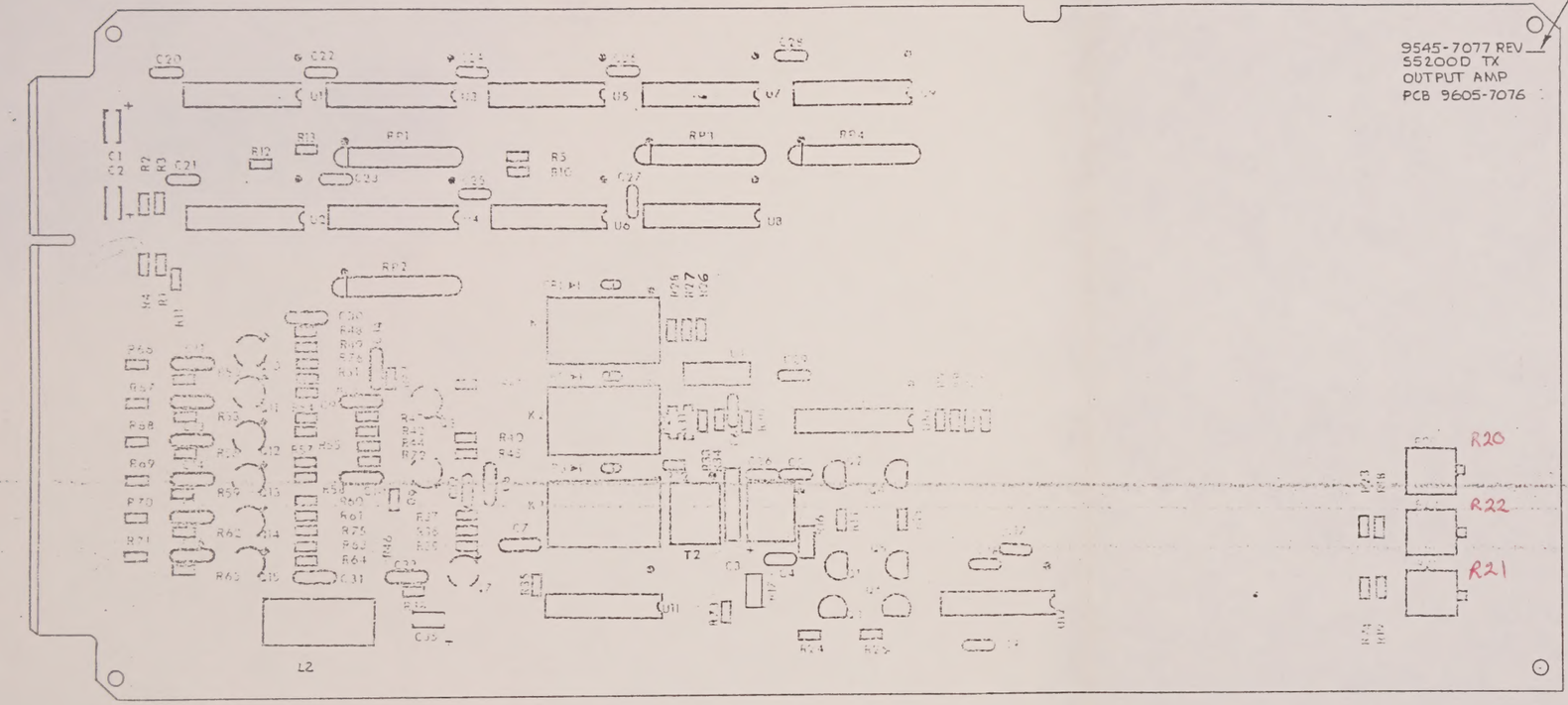
DRAWING TITLE: SCHEMATIC OUTPUT AMPLIFIER

SIZE	CODE IDENT NO.	DRAWING NO.	REV
D		TDJ-57075	D

SCALE · 55200D TX · SHEET 2 OF 2

57075

	E	REDRAWN REPLACES REV D REV PER ECO#02377 RZ 11MAR86	3/12/86	RL	



NOTES:

1. PLACE THE ASSEMBLY PARTS LIST REVISION MARK ON THE ASSEMBLY IN DESIGNATED AREA.

DEC 16

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: ANGLES ± ## FRACTIONS ± ## 3 PLACE DECIMALS ± ## 2 PLACE DECIMALS ± ## 1 PLACE DECIMALS ± ## MATERIAL ##	DRAWN J.T 9-16-80 CHK B.COOPER 9-18-80 ENGR WEL 9-18-80 APPROVED MFG APPLICATION	tau-tron DRAWING TITLE ASSEMBLY OUTPUT AMPLIFIER	
E57154 S5200D TX NEXT ASSY USED ON APPLICATION		SIZE D DRAWING NO. 57077 REV E SCALE 2/1 S5200D TX SHEET 1 OF 1	

PROPRIETARY INFORMATION

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REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	E	REV. PER ECO # 02147	7/8/85	
	F	UPDATED PER DOC ACCURACY PROG ECO # 02197	8/16/85	

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	B	REV PER ECO 00161 C6 3-13-81	3-18-81	SAR KAB
	C	REV. PER ECO 00175 ALL 6 CKTS	10-8-81	JAC KAB
	D	CHANGED R22 FROM 4.02K TO 4.32K 1% 100 ppm	3-31-82	JAC KAB

EXTERNAL CLOCK CONTROL

TRANSMITTER CLOCK OSCILLATOR

CLOCK PHASING

MONITOR AMPLIFIERS

JITTER ENABLE

JITTER AMPLIFIER AND CONTROL

EXTERNAL ERROR FROM REAR PANEL

X-BIT FROM REAR PANEL

NOTES:
1) UNLESS OTHERWISE SPECIFIED:
A. RESISTANCE VALUES ARE IN OHMS, 1/4W, 5%.
B. CAPACITANCE VALUES ARE IN MICROFARADS.
2) UNMARKED CAPACITORS ARE .01 μf.
3) COMPONENTS TO BE ADDED OR TRIMMED IN TEST AS REQUIRED.

LAST REF DES USED	UNUSED
R50	L1
RP1	Y1
C23	C6
CR3	
Q6	
U17	

REFERENCE DRAWINGS:
ASSEMBLY: D9645-7087
FABRICATION: D9605-7086

WHERE APPLICABLE: REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64.	
TDK-57087	5520CD XMTR
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES: ANGLES ±
FRACTIONS ±
3 PLACE DECIMALS ±
2 PLACE DECIMALS ±
1 PLACE DECIMALS ±
MATERIAL:

CONTR NO.

DR	C. Smith	4-1-80
CHK		4-16-80
APPD		4-11-80
APPROVED		
BY DIRECTION OF		

tau-tron inc
Chelmsford, Ma. 01824

DRAWING TITLE
SCHEMATIC
OSCILLATOR/INTERFACE P.C.B.

SIZE	CODE IDENT. NO.	DRAWING NO.	REV
D		57085	F

SCALE — | 5520CD | SHEET

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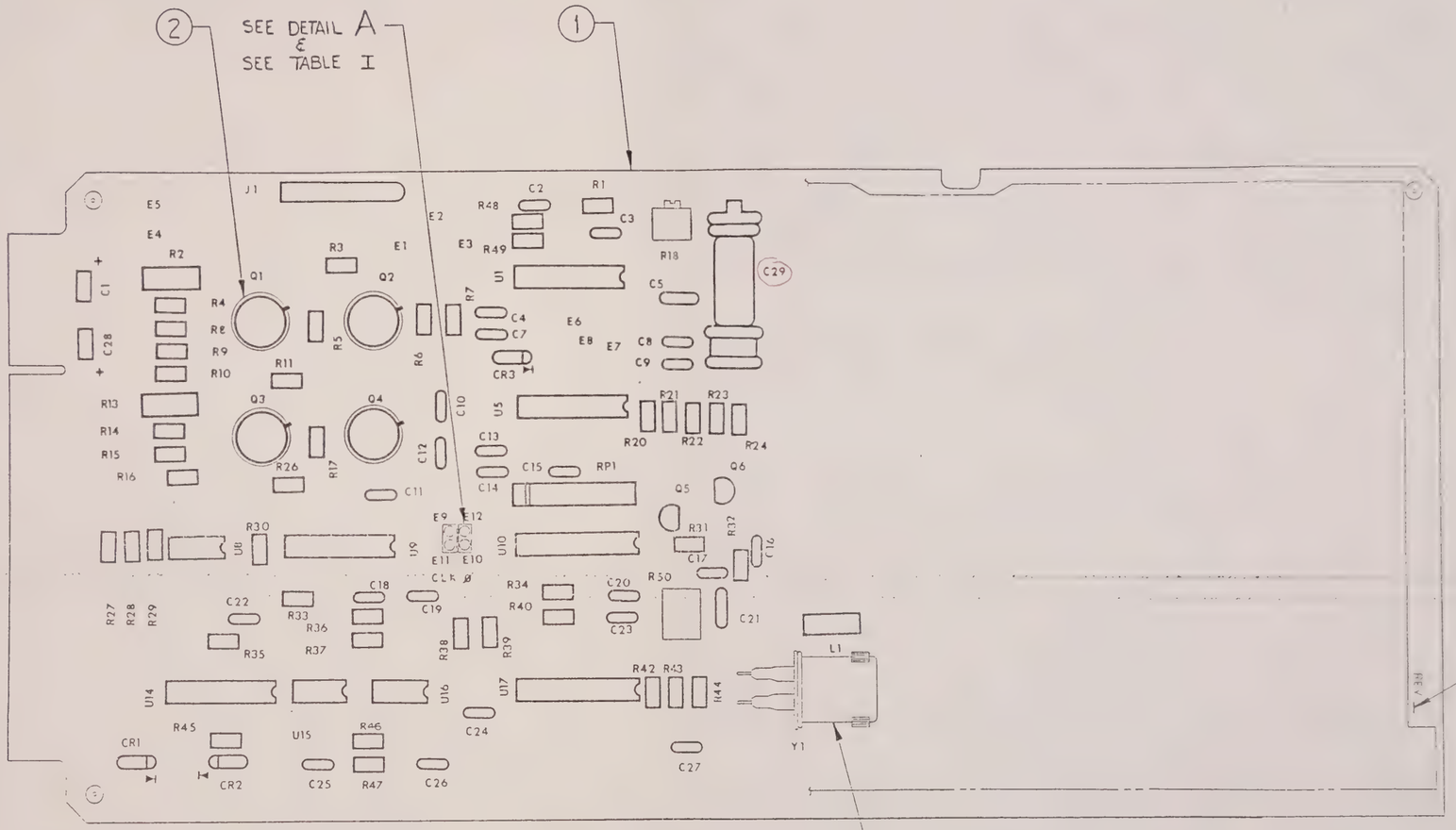
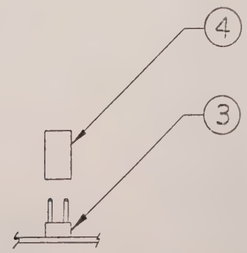
	H	REDRAWN, REPLACES REV G WITH CHG PER DOC ACCURACY PROG ECO # 02197 05/07/31	8/15/85	PK/PC

TABLE I	
JUMPERS	
FROM	TO
E9	E11
E12	E10



NOTES:

1. PLACE A PERMANENT REVISION LEVEL MARK ON THE ASSEMBLY IN THE DESIGNATED AREA.
2. INSTALL CRYSTAL AFTER SOCKET HAS BEEN INSTALLED.



DETAIL A

E-57158 S5200D TX	DR C. ATHERTON 1/23/81	tau-tron	
NEXT ASSY USED ON	CHK B. COOPER 1/29/81		
APPLICATION	APPD W. ROLLINS 1/29/81	OSCILLATOR INTFC PCB ASSY	
	APPROVED	SIZE D / 954	DRAWING NO 57087 / REV H
	BY DIRECTION OF	SCALE 2/1	S5200D TX / SHEET 1 OF 1

MATERIAL

57087

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ZONE	LTR	DESCRIPTION	DATE	APPROVED
	4	[illegible]	4-24-85	JBH [illegible]
	5	REVISED PER ECO#02172	5-29-85	DMC
	A	REVISED PER ECO#02172 [illegible]	[illegible]	DMC
	B	REV. PER ECO/00572 [illegible]	[illegible]	[illegible]
	C	REV. PER ECO#[illegible]	6-6-87	[illegible]
	D	REV. PER ECO#[illegible]	2-28-89	[illegible]
	E	REV. PER ECO#02033 [illegible]	11-[illegible]	RL
	F	UPDATED PER ECO#02181 T.R. 7-19-88	8/19/88	RL

NOTES:
1. UNLESS OTHERWISE SPECIFIED:
   A. RESISTANCE VALUES ARE IN OHMS, 1/4W, ±5%.
   B. CAPACITANCE VALUES ARE IN MICROFARADS.
2. ⊖ DENOTES 470Ω RESISTOR TO -5.2V
3. ○—○ DENOTES WIRE JUMPER (TYP.) E1, E2, E3, E4, E5.

LAST REF DES USED		UNUSED
U43	TP16	
RP11	E7	
RP5	12	
C42		
CR3		

REFERENCE DRAWINGS:
ASSEMBLY: TDK-57010
FABRICATION: TDG-57008

DEC

TDK-57010	552000 TX
NEXT ASSY	USED ON
APPLICATION	

WHERE APPLICABLE: REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES: ANGLES ±
FRACTIONS ±
3 PLACE DECIMALS ±
2 PLACE DECIMALS ±
1 PLACE DECIMALS ±
MATERIAL:

CONTR NO.

DR	C. Smith	3-29-85
CHK	R.C. Hill	4-4-85
APPD	[illegible]	4-9-85

APPROVED
BY DIRECTION OF

tau-tron inc
Chelmsford, Ma. 01824

DRAWING TITLE
SCHEMATIC
TRANSMIT GENERATOR PCB

SIZE	CODE IDENT NO.	DRAWING NO.	REV
D		57008	F

SCALE — | 552000 TX | SHEET 1 OF 2

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ZONE	LTR	DESCRIPTION	DATE	APPROVED
		FOR REVISIONS		

R16 5.6K +5V
C31 220pf
SH.1, U16-5 OH STROBE
U27 74123
R15 10K +5V
+5V U29 14520
TP-3
TP-4
+5V U29 14520
U38 14023
U28 14075
U30 14001
U18 14512 INH VSS DISABLE VDD X0 X1 X2 X3 X4 X5 X6 X7
+5V
Q2 2N4401 +5 TP5
MFPC SH.1, U13-7
R31
R6 10K TP-
U18 14512
+5V
V1 P5 10K TP2
FROM SH.1 U10-4 PARITY
U21-7 BLUE(H)
FROM OSC INTERFACE 36 X-BIT
U20 14011
R7 10K R8 10K +5V
U43 RES 96 14040
TP-7 E90
TEST E9
U38 14023
U30 14001 U41
Q1 2N4401 R40 10K
U39 U40 U41 U42 U43 U4
R11 10K +5V
REAR PANEL SWITCH 44 ENABLE BURST ERROR(L)
FROM OSC INTERFACE 42 EXTERNAL ERROR
U38 7410 U37 7410 U37
ERROR MODE
FROM STD INTERFACE 48 EXTERNAL ERROR ENABLE(H) 49 SINGLE BIT ERROR(H)
U36 7400 U36 7400 U37 7410
R9 2K +5V TP-9
M-SYNC 40 TO OSC INTERFACE
BURST ERROR(L) U13-11
SINGLE ERROR REA(H) U13-5
TO SH.1
TP-8
FROM SH.1 U1-2 CLOCK
U30A 10105 R30
U17 10135 U16 10125
U32 74LS393 CLR SET
U33 14538
U34 14538
U35 14538
R35 2K, 1/8W +5V
R32 1.1K, 1/8W
R33 1.3K, 1/8W -5.2V
U30A 10105
R34 470 -5.2V
R27
U42 10131
R28
R26 160
R26, 270 -5.2V
R29 1.1K
R25 1.3K -5.2V
R22 2K +5V
R17 5.1K +5V
RP5 470 470 -5.2V
U31 74150
FROM STD INTERFACE
39 20(H)
41 21(H)
43 22(H)
45 23(H)
47 ERROR INSERT(H)
U36 7400
U3 14011
U3 14011
U3 14011

WHERE APPLICABLE: REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64.	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES: ANGLES ± FRACTIONS ± 3 PLACE DECIMALS ± 2 PLACE DECIMALS ± 1 PLACE DECIMALS ±	CONTR NO.	tau-tron INC Chelmsford, Mass. 01824
	MATERIAL:	DR C. Smith 8-29-80	DRAWING TITLE: SCHEMATIC TRANSMIT GENERATOR PCB
TDK-57010 | S52000 TX		CHK	
NEXT ASSY | USED ON		APPD W. Little 1-9-80	
APPLICATION		APPROVED BY DIRECTION OF	SIZE D | CODE IDENT NO. | DRAWING NO. 57008 | REV F
			SCALE — | S52000 TX | SHEET 2 OF 2

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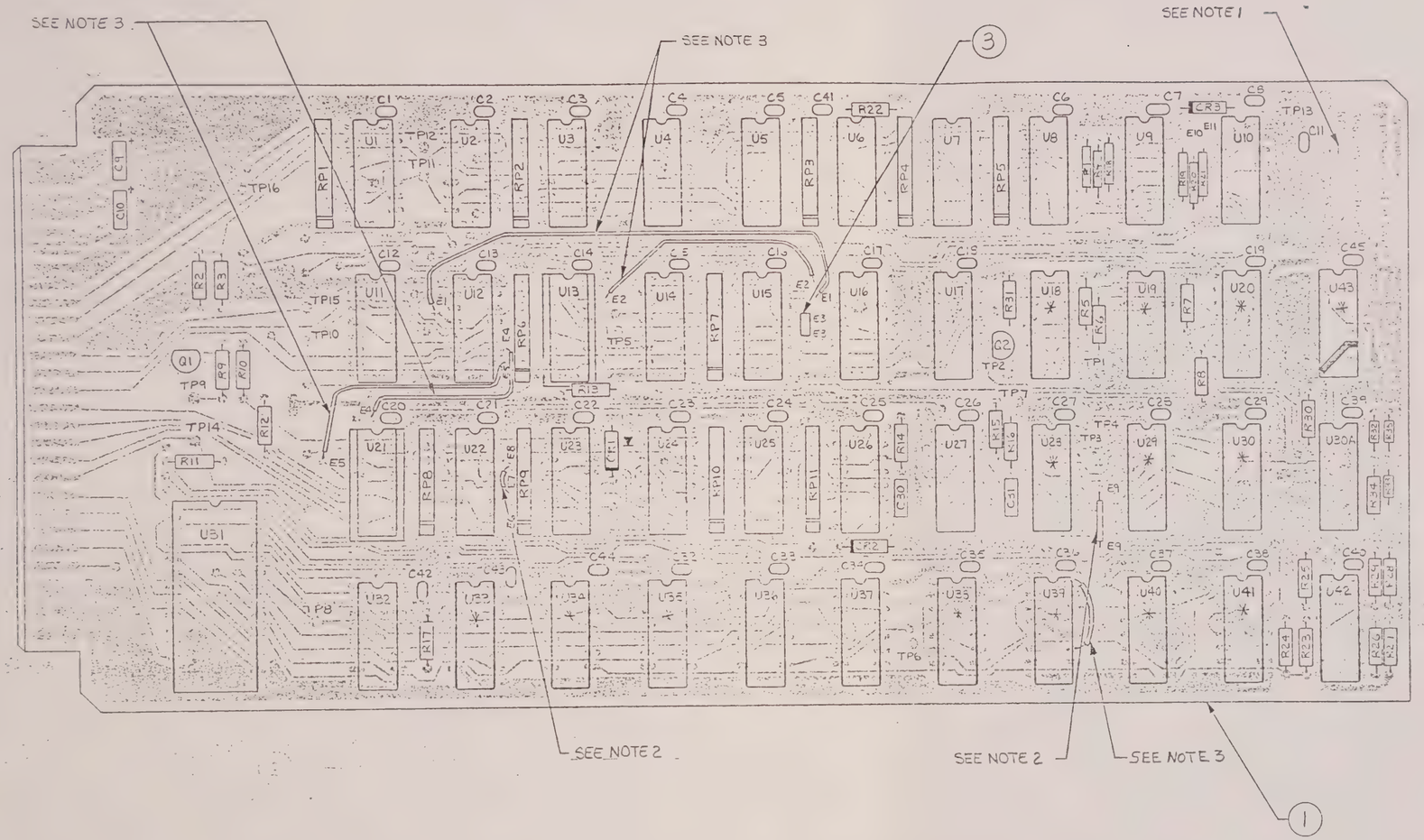
	H	REV PER ECO# 02033 TMM 1-24-85	1-25-85	JT	6
	J	UPDATED PER DOC ACCURACY PROG PER ECO# 02096 6-28-85 DA	7-29-85	JT	SNE
	K	UPDATED PER ECO# 02161 TO 8.5.85	8/5/85	MC	JT
	L	REV PER ECO# 02208	10/22/85	DW	JT



1. PLACE A PERMANENT REVISION LEVEL MARK ON THE ASSEMBLY IN THE DESIGNATED AREA.
2. JUMPERS TO BE #24 AWG BUS WIRE WITH SLEEVING
3. JUMPERS TO BE #30 AWG INSULATED WIRE
4. * - DENOTES STATIC SENSITIVE DEVICE

J.T	12-31-80	ASSEMBLY
B.COOPER	1-9-81	TRANSMIT GENERATOR PCB
W. ROLLINS	1-20-81	

S5200D TX

SEE P. L.
9545-7010

954 57010 L

S5200D TX 1 1

57010

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REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	H	REV PER ECO# 02715	4/13/84	DK

FROM GPIB CARD

U10 74LS241

READ

FROM GPIB CARD

U4 74LS241

WRITE

FROM GPIB CARD

SRQ

U19 4416-8034 ADD DECODER

+5V R1 10K

U20 74LS155 WRITE DECODE

U1 74LS74 GPIB LATCH

TO CPU IN
O=CPU OUT

R17 1K 5% 1/4W
+5 O=LOCAL
1=REMOTE

LOC/REM SELECTS 74LS157 U5

DATA LATCHES 74LS175 U13

LEVEL SEL DECODER
U7 74LS155
74LS04 U9

U11 74LS157

U16 74LS175

U3 74LS86

1K 5% 1/4W

U6 74LS157

74_575 U22

RESET ACTIVE LOW

U24 74LS32

74LS00

U23 74LS02

U18 74LS08

U12 74LS157

SEE NOTE 3

FROM FRONT PANEL CONTROL SWITCH

J2-26 LEVEL SELECT A
J2-27 LEVEL SELECT B
J2-23 PATTERN SELECT
J2-24 FORMAT SELECT
J2-29 D0
J2-26 D1
J2-22 D2
J2-23 D3
J2-20 ERROR FREE
J2-19 ERROR INSERT
J2-30 EXT. ERROR
J2-37 SINGLE BIT ERROR
J2-36 SINGLE & DOUBLE VIOLATION
J2-31 AC POWER LOSS
J2-5

TO TRANSMITTER GENERATOR

TO TRANSMITTER GENERATOR

FROM REAR PANEL P.C. BOARD

TO FRONT PANEL DISPLAY DRIVERS

J2-36 ERROR FREE
J2-35 ERROR INSERT
J2-34 EXT. ERROR
J2-33 REMOTE
J2-32 PRBS
J2-31 ALL ONES
J2-30 1010---
J2-29 1100---
J2-28 POWER LOSS
J2-10

J2 11 12 +5V
J2 13 14
J1 1 12 C1 33, 10V C2-C13 .01 µf
J1 3 14
J1 5 16 +5.2V

ADDRESS INPUT		DECODER OUTPUT				READ/WRITE DECODE OUT			
ASCII	HEX	O4	O3	O2	O1	2Y1	2Y2	2Y3	1Y2
NULL	00	0	0	0	1	0	1	1	1
D	44	0	0	1	0	1	0	1	1
E	45	0	0	1	1	1	1	0	1
F	46	0	1	0	1	1	1	1	0

DESIG	WITH GPIB: XMTR STD & GPIB BUS INTERFACE QTY	WITHOUT GPIB: XMTR STD BUS INTERFACE QTY
U4	1	0 (NOT USED)
U8	1	0
U10	1	0
U14	1	0
U15	1	0
U17	1	0
U19	1	0
U20	1	0
U21	1	0
RP2	1	0
R2-R5	1 EACH	0 EACH

LAST REFDES USED	UNUSED
R18	
C16	
U24	
RP2	

O=PRBS
1=FIXED PATTERN

DATA PATTERN SELECTOR
74LS158 U3

R2 5.1K R3 5.1K R4 5.1K R5 5.1K

1111 20
1010 22
1100 24

Y4 PRBS
Y3 ALL ONES
Y2 1010---
Y1 1100---

REAR PANEL FIXED PATTERN SELECTOR ACTIVE LOW INPUTS

NOTES:
1. UNLESS OTHERWISE SPECIFIED:
   A. RESISTANCE VALUES ARE IN OHMS, 1/4W, ±5%.
   B. CAPACITANCE VALUES ARE IN MICROFARADS.
2. ☐ DENOTES PIN CONNECTOR.
3. COMPONENT TO BE ADDED IN TEST AS REQUIRED; (.01 µf CAPICITOR).

TDK-57213	552000 XMTR
TDK-57084	552000 XMTR
NEXT ASSY	USED ON
APPLICATION	

WHERE APPLICABLE: REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES: ANGLES ±
FRACTIONS ±
3 PLACE DECIMALS ±
2 PLACE DECIMALS ±
1 PLACE DECIMALS ±
MATERIAL:

CONTR NO.

DR	C. Smith	3-24-83
CHK	K. [illegible]	4-[illegible]
APPD	[illegible]	[illegible]

APPROVED
BY DIRECTION OF

tau-tron inc
Chelmsford, Ma. 01824

DRAWING TITLE
SCHEMATIC
STD & STD GPIB INTERFACE PCB

SIZE	CODE IDENT NO.	DRAWING NO.	REV
D		57082	H

SCALE — | 552000 XMTR | SHEET 1 OF 1

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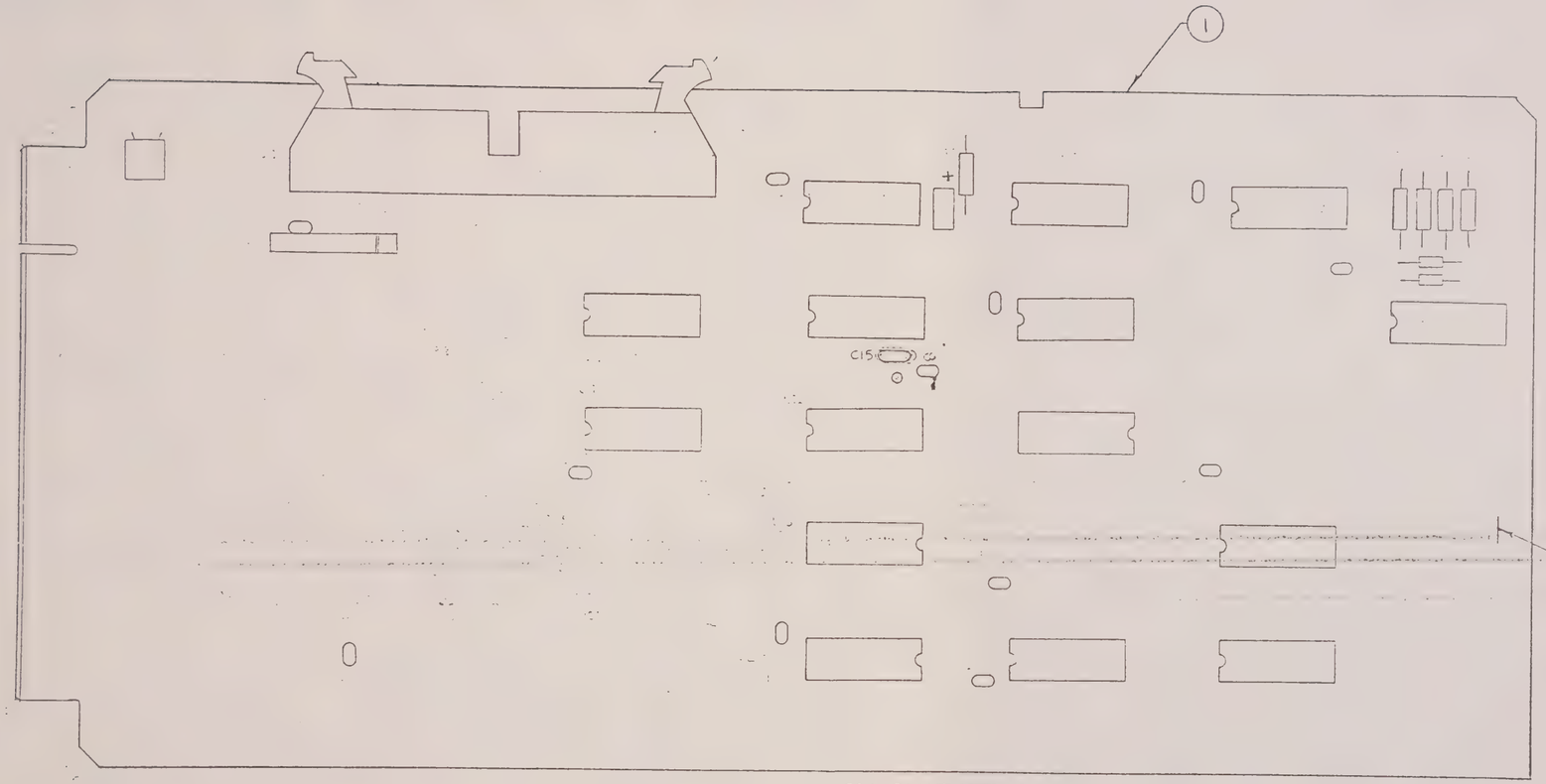
	D	REDRAWN PER ECO'S [illegible]	[illegible]	[illegible]
	E	REV. PER ECO 1324 PER S. [illegible]	[illegible]	[illegible]
	G	REV. PER ECO#01484 M.E.H 10-24-83		
	H	UPDATED PER DOC ACCURACY PROG ECO # 02197 85-01-22	5/16/85	PK



COMPONENT SIDE.

NOTES:
1. [illegible]
2. ~~DENOTES ASSY CHANGES.~~
3. PLACE A PERMANENT REVISION LEVAL MARK ON THE ASSY IN THE DESIGNATED AREA.
4. ~~SOLDER TIE WIRES IN OPPOSITE DIRECTION FROM REMAINING ICS.~~

BUDD	1-2-81	
WR	1-9-82	

ASSEMBLY
STD BUS INTERFACE PCB.

E-57154 SSZOOD TX

945 57084 H

2-1 SSZOOD TX

57084

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ZONE	LTR	DESCRIPTION	DATE	APPROVED
	0	CAD GENERATED	2-24-82	MK
	1	REV PER PDC 00721	ECO 2338 3-23-82	MK
	A	REV PER DCN 00795.	ECO 2338 12-6-81	BAC
	A	REV PER DCN 00825	2-6-81	BAC
	B	UPDATED PER PDC ACCURACY REQ'S ECO = C2197	ECO 2197 12-15-85	PK

(X8) 82YY3101-129
SPST
S5 BIT ERROR
S3 BIPOLAR VIOLATION
S1 ERROR MODE
S4
S2
S8 PATTERN SELECT
C7 1000pf
U7 MC14490
U1 MC14049
SPST
S7 FRAMED/UNFRAMED
S9 LEVEL SELECT
U16 MC14490
U2 MC14049
ERROR MODE SELECT
MC14066 R1 30K R2 30K
U4
R5 30K R7 30K
R23 30K R6 30K
U5
ANALOG SWITCHES MC14066
R8 30K
MC14001
U3 MC14011
U8
U9 MC14001
3K R14
C10 100pf
R36 5.6K
C36 100pf
U11 MC14073
MC14510 7V
U15
EXPONENT SELECT
MC14035
U20
R19 30K
U12 MC14011
½ MC14013
U6
U10 MC14013
PATTERN SELECT
FRAMED/UNFRAMED
LEVEL SELECT BIT A
LEVEL SELECT BIT B
1=ON 0=OFF
BT1(+) E3 C
CR1 IN4001
R4 10
R3 47
CR3 CR2
+5V
TO VDD INPUT OF ALL CMOS LOGIC IN THIS BLOCK
C3-6,8,11, 14-17,21,25, 30
SWITCH DRIVER U21/a MC14011
U26
DATA HOLD CONTROL
½ NE556
U22
R22 10K
R21 2K
Q1 2N4401
U19 7404
R26 1K
C19 10 25V
C29 10 25V
POWER LOSS DETECTOR
ENERGIZE
J1-
E1 E1
FROM AC POWER MONITOR
REMOTE DC INPUT SENSE
DETECTED DC INPUT
R27 15
CR13
C24 10 25V
SINGLE BIT ERROR
SINGLE BIPOLAR VIOLATION
ERROR FREE
ERRORS INSERT
EXT. ERRORS
MC14066
U13
U18
U17
ANALOG SWITCHES
RESET
AC LOSS
TO STD INTERFACE CARD
J1-
35
21
20
19
30
29
26
22
25
23
24
28
27
37
5
82YY3101-129
SPST S6
R20 10K
RESET/LAMP TEST
R29 5.6K
AC FAILURE LOSS LATCH 74LS74
U21
FROM STD INTERFACE CARD
RESET
33
7433 U28
R35 10K
+0.5V
(X14) MV053
CR6 ERROR FREE
R12
ERROR INSERT
U27
U29 74L04
U29
7433
CR5 CR6
U24
R31
GND
7451 U25
C22 47 25V
R24 1.2K
R25 6.2K
CR11 CR12
U22
½ NE556
C23 0.1uf
T=150 us
T=300 us
EXPONENT DISPLAY T-1-3/8
U14
OFF/BLINK 1=ON

LAST REF DES USED		
U29	CR20	U1
C1	S9	C36
R36	E3	

NOTES:
1) UNLESS OTHERWISE SPECIFIED:
A. ALL RESISTORS ARE 1/4W, 5%, EXPRESSED IN OHMS.
B. ALL CAPACITORS ARE .01, EXPRESSED IN MICROFARADS.
C. ALL DIODES ARE IN4148.

+5VOLT RECOVERY TIMING DIAGRAM
TURN-ON REGION
+5V TURN-ON
POWER LOSS DETECTOR CLEAR
POWER LOSS DETECTOR OUTPUTS Q, Q̄
TRANSITION OCCURS ON FALLING EDGE OF 1.2 MHz CLOCK AFTER CLEAR
POWER LOSS LATCH CLOCK
2N4401 OUT
NE556 OUT
7404 OUT
SWITCH DRIVER INPUT
SWITCH DRIVER OUTPUT
3V
0 ms
40ms
100 ms
ON
OFF

TDK-57069	S5200DTX
NEXT ASSY	USED ON
APPLICATION	

WHERE APPLICABLE: REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES: ANGLES ±
FRACTIONS ±
3 PLACE DECIMALS ±
2 PLACE DECIMALS ±
1 PLACE DECIMALS ±
MATERIAL:
CONTR NO.
DR P. Graham 2/20/80
CHK [illegible] 2/20/80
APPD [illegible] 4-17-80
APPROVED
BY DIRECTION OF

tau-tron inc
Chelmsford, ma. 01824

DRAWING TITLE
S5200D TRANSMITTER
FRONT PANEL CONTROLS/DISPLAY

SIZE	CODE IDENT NO.	DRAWING NO.	REV
D		57067	B
SCALE —	5200D	SHEET 1 OF 1	

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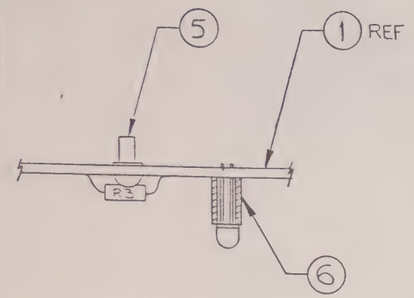
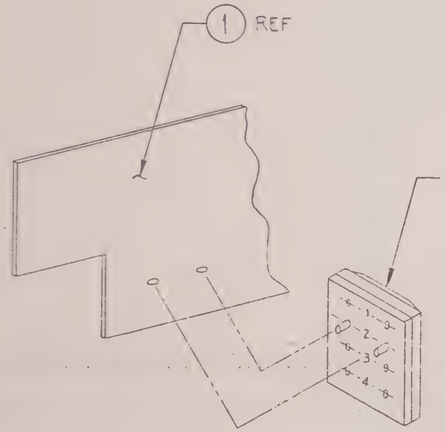
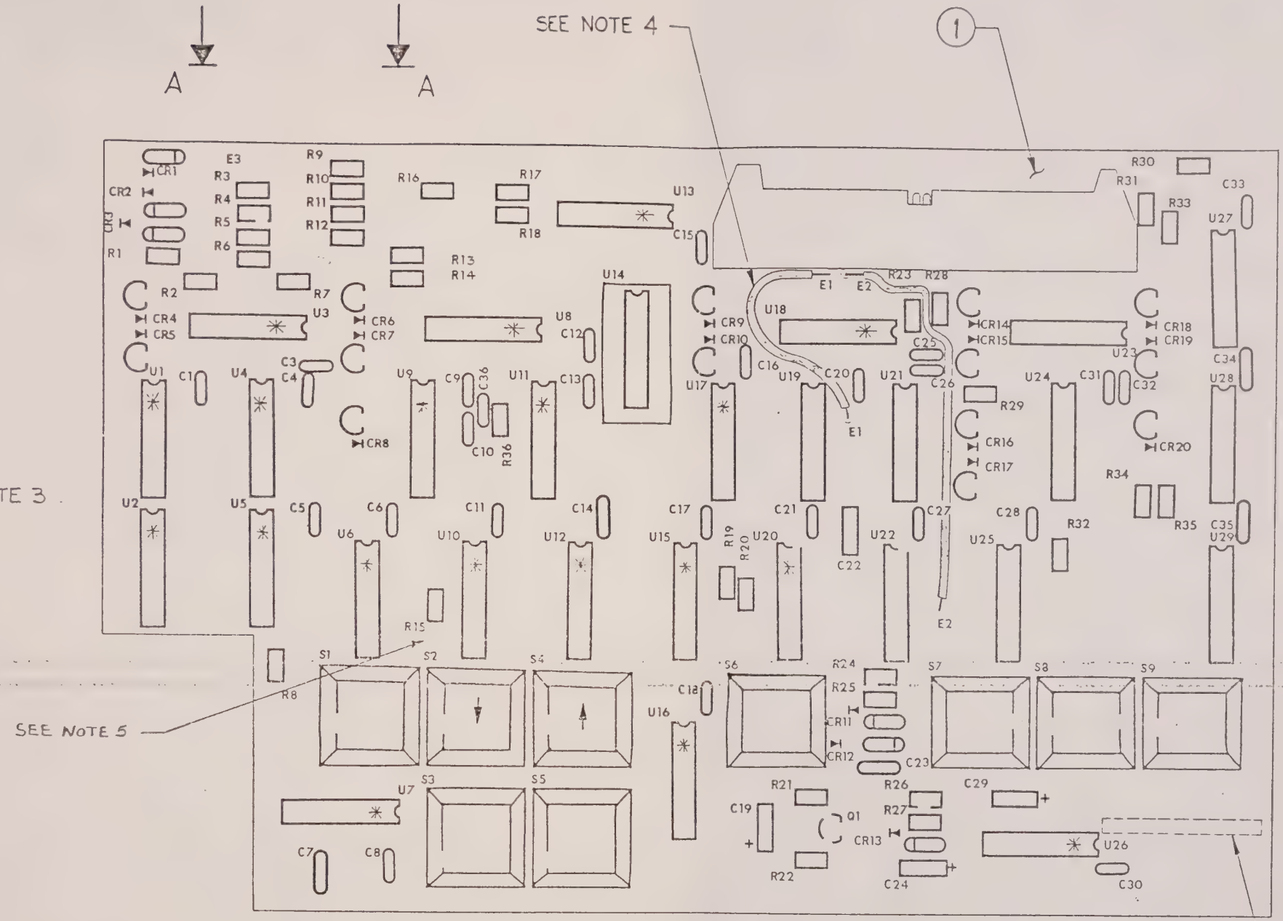
	B	REDRAWN, WITH CHANGES REPLACES REV A. # 02221	05/04/10	4/24/85
	C	REV PER ECO # 02575	MCD 8/4/86	8/9/86
	C1	REV PER AUDIT # A0464	MCD 10/7/86	10/8/86



VIEW A-A



DETAIL B
SCALE : NONE



NOTES:

1. CHANGE ASSY NO. FROM 9545-7069, TO 9545-7355. THEN PLACE THE ASSEMBLY PARTS LIST REVISION, ON THE ASSEMBLY IN THE DESIGNATED AREA.
2. STATIC SENSITIVE DEVISES ARE DENOTED BY THE SYMBOL " * ".
3. INSTALL S1 THRU S9 (SWITCHES), AFTER WAVE SOLDERING, WITH PIN LOCATIONS AS SHOWN IN DETAIL B. CLEAN WITH ISOPROPYL ALCOHOL.
4. UNLESS OTHERWISE SPECIFIED THE FOLLOWING APPLY;
   A) ALL JUMPER CABLES TO BE #26 AWG STRANDED INSULATED WIRES.
   B) ALL LED's REQUIRE SPACERS.
5. REMOVE R1 LOCATED UNDER R15 ON COMPONENT SILK SCREEN.

WHERE APPLICABLE REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
	TOLERANCES ANGLES ±
	FRACTIONS ±
	3 PLACE DECIMALS ±
	2 PLACE DECIMALS ±
	1 PLACE DECIMALS ±
	MATERIAL
D-57360 / 55200E TX	
NEXT ASSY / USED ON	
APPLICATION	

DR	C.S.	9/20/80
CHK	R.B	9/25/80
APPD	W.E.L.	9/25/80
APPROVED		
BY DIRECTION OF		

tau-tron

DRAWING TITLE
TRANSMITTER FRONT PANEL CONTROL & DISPLAY PCB

SIZE	CODE IDENT NO	DRAWING NO	REV
D		57355	C1

SCALE 2/1 | 55200 E | SHEET 1 OF 1

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REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	0	ORIG. PER PDC 00718	9-15-80	B. Cooper
	1	REV PER PDC # 00734	11-3-81	[illegible]
	A	REV PER DCN 00807	3-12-82	[illegible]
	B	REV PER ECO # 00947 C.S.	6-24-21	[illegible]
	C	UPDATED PER DOC ACCURACY PROG ECO # 02197	8/19/25	[illegible]

GPIB
57-20240-8
J3

DIP SWITCH
208-8
S1

J4
609-4027

MONITOR
57-20240-3
J2

ALL 1'S ENABLE
1010 ENABLE
1100 ENABLE
M-SYNC
M-SYNC (L)
PR SYNC
PR SYNC (L)
X-BIT IN
AC POWER LOSS (L)
AC POWER LOSS
ENABLE BURST

+5V

609-4027

R7 10K
R6 24K
R9 270
C5 10µf 25V
R2 510
R5 24K
C3 4.7 20V
CR3 IN4148
C2 .47 6V
CR4 IN4148
CR2 IN5229A
R1 10K
R4 1K
C1 .01
C4 10µf 25V
U1 74123
U2 7404
U2 7404
JUMPER

REMOTE DC E5
AC-INPUT E6 (AC-DC OPERATION)
AC-INPUT E7 (AC-ONLY OPERATION)
GND E8

E1 E2 E3 E4

ALL 1'S
1100
1010
RATE
BURST

FIXED PATTERN
EXT. ERROR SELECT

SWITCH SCHEMATIC SHOWN FUNCTIONALLY
EXTERNALLY MOUNTED SWITCHES

NOTES:
1. UNLESS OTHERWISE SPECIFIED:
   A. RESISTOR VALUES ARE IN OHMS, ¼W, ±5%.
   B. CAPACITOR VALUES ARE IN MICROFARADS.

REFERENCE DRAWINGS:
ASSEMBLY: TCK-57186
FABRICATION: TCG-57185

U2	
S1	
R9	
J3	
CR4	R3,8
C3	CR1
LAST USED	UNUSED
APPLICATION	

WHERE APPLICABLE:
REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64.

C-57186	S5200D TX
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES: ANGLES ±
FRACTIONS ±
3 PLACE DECIMALS ±
2 PLACE DECIMALS ±
1 PLACE DECIMALS ±
MATERIAL:

CONTR NO.

DR Y.J.	9-3-80
CHK B. Cooper	9-15-80
APPD WEST	9-18-80

APPROVED
BY DIRECTION OF

tau-tron inc
Chelmsford, Ma. 01824

DRAWING TITLE
SCHEMATIC
TX REAR PANEL INTERFACE BOARD

SIZE	CODE IDENT NO.	DRAWING NO.	REV
C		57184	C

SCALE # | S5200D TX | SHEET 1 OF 1

07-0043 (8/71) .003 MYLAR

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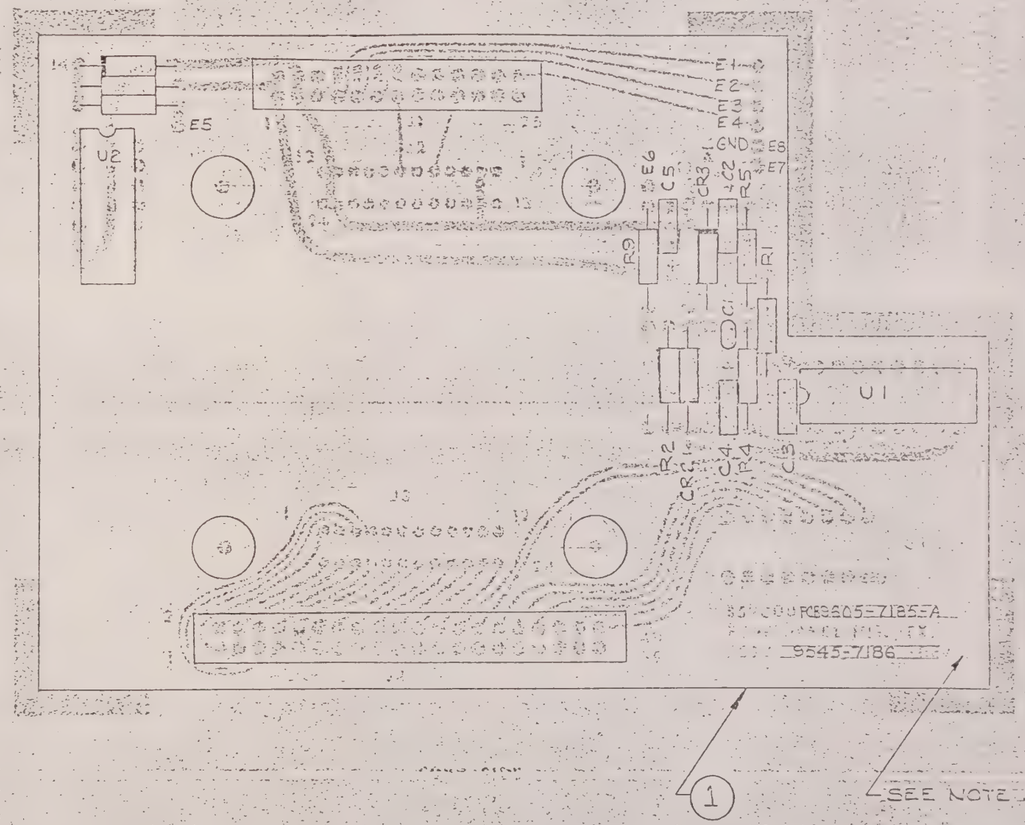
ZONE	REV	DESCRIPTION	DATE	APPROVED
	0	ORIG. PER PDC 00718	9-25-80	
	1	REV PER PDC# 00784 SUDO	11-12-80	
	A	REV PER DCN 00807	1-6-81	
	B	REV PER ECO# 00949	4-24-81	
	C	REV PER ECO# 01735 MEH 2-21-84	4-23-84	
	D	UPDATED PER DOC ACCURACY PROG ECO # 02197	8/10/89	



NOTES:

1. ~~SURFACE OF PARTS SOLDERED~~
   ~~A. RESISTOR PARTS ARE INSULATED WITH~~
   ~~B. CAPACITOR PARTS ARE INSULATED~~
2. SEE SHEET 2 FOR COMPONENTS ON
3. WIRING SIDE
   PLACE A PERMANENT REVISION LEVEL MARK ON THE ASSY IN THE DESIGNATED AREA.

WHERE APPLICABLE REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: ANGLES ± FRACTIONS ± 3 PLACE DECIMALS ± 2 PLACE DECIMALS ± 1 PLACE DECIMALS ± MATERIAL
D 57144 / S5200D-TX	
NEXT ASSY / USED ON	

CONTR NO.

DR	JJ	9-2-80
CHK	B. Cooper	9-15-80
APPROVED		

TAU-TRON

DRAWING TITLE
ASSEMBLY
REAR PANEL INTERFACE TX

SIZE	DRAWING NO.	REV
C 954	57186	D

SCALE 2/1 | S5200D-TX | SHEET 1 OF 2

57186

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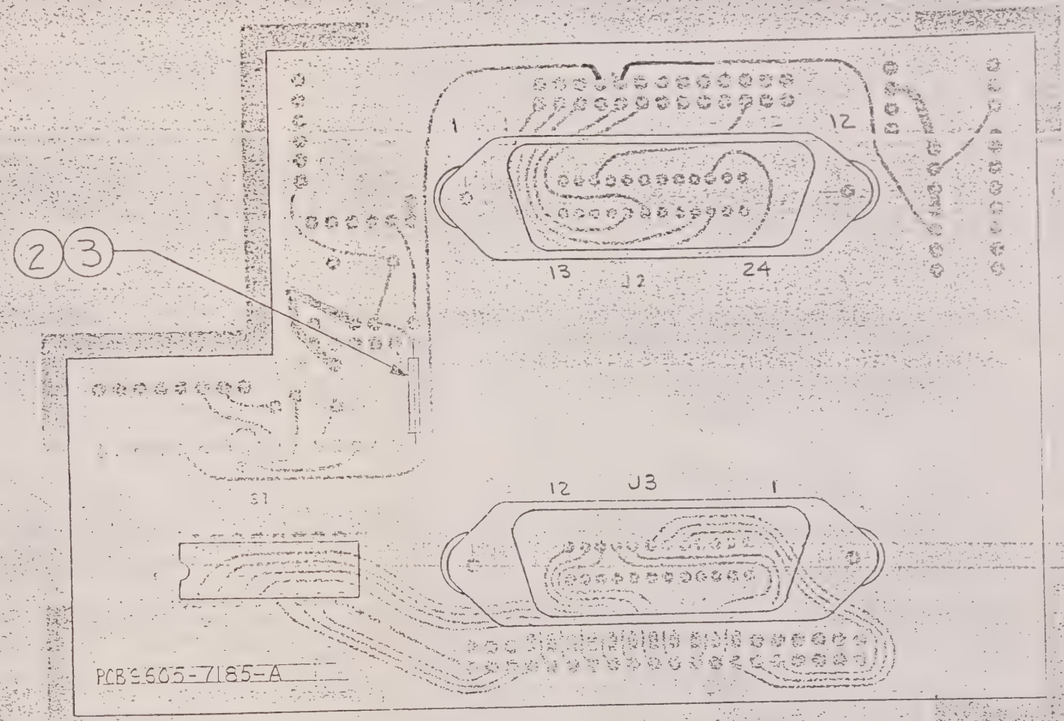
	C	SEE SHEET 1 FOR REVISIONS		



WIRING SIDE

D 57144 S5200D TX	DR J.I.	9-2-80	ASSEMBLY
NEXT ASSY USED ON	B. Cooper	9-15-80	REAR PANEL INTERFACE TX
	WEZ	9-15-80	
MATERIAL 11	APPROVED		C 954 57186 D
	BY DIRECTION		S/I S5200D TX SHT 2 OF 2

57186

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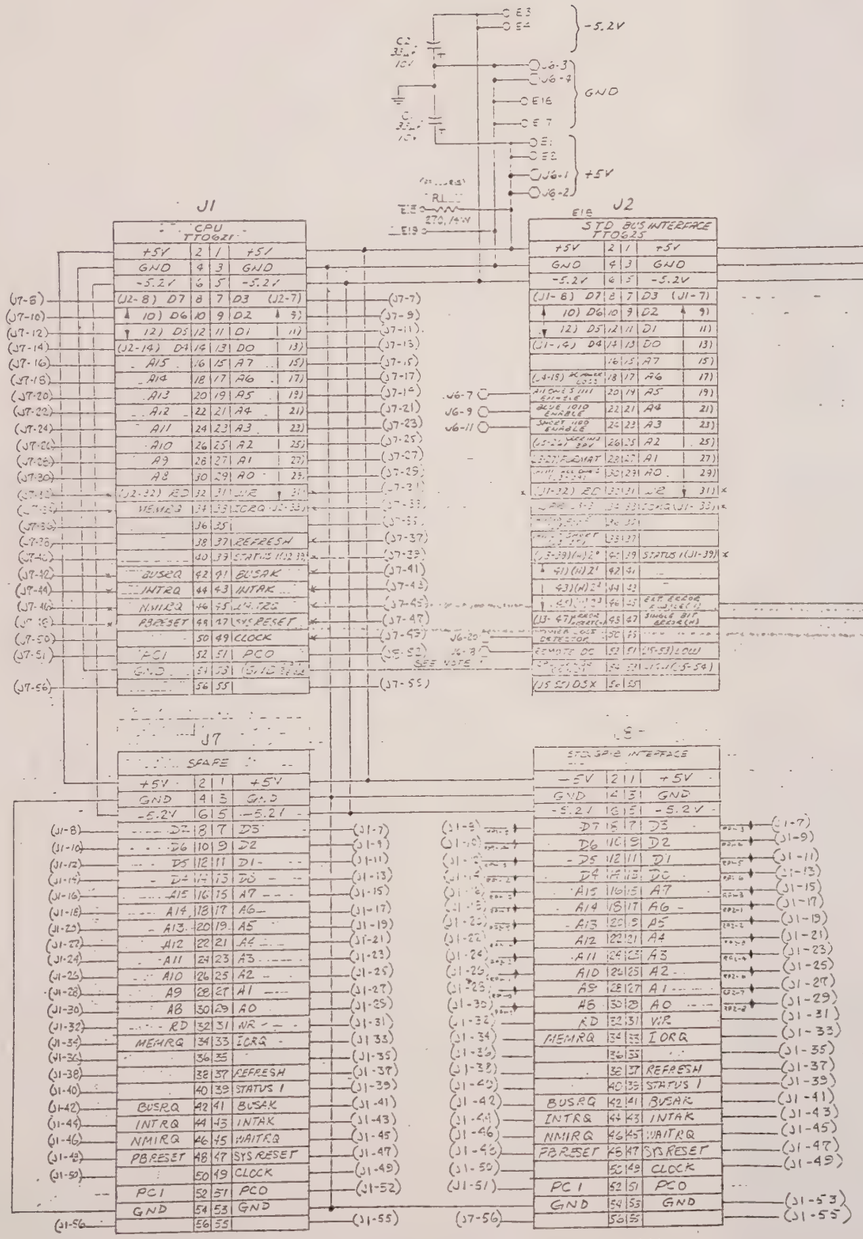
REVISIONS			
ZONE	DESCRIPTION	DATE	APPROVED
	2 REVISED & REDRAWN PER ENGR REQUEST	3-19-80	
	3 PER PDC 00722 AAM	9-22-80	
	A SEV PER LCN 22806 C.S	1-8-81	
	B REV PER ECO/CIC 93	12-1-11	
	C REV PER ECO/CIC 123	4-22-82	
	D UPDATED PER ECO REVISED PER ECO 02197	8-2-83	

COMPONENT SIDE



NOTES:
1. J1-53(GND) TIES TO J2-54(CPUSENSE(GND)) & DOES NOT TIE TO ANY OTHER GND ON THE P.C. MOTHER BOARD.
2. ○ INDICATES CONNECTIONS TO REAR PANEL CONNECTOR J6.
3. X INDICATES LOW LEVEL ACTIVE.
4. + DENOTES 1.5K Ω RESISTOR TO +5V

FRONT VIEW

WHEN APPLICABLE: REMOVE ALL BURRS & BREAK SHARP EDGES TO 1/64	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES, ANGLES ± FRACTIONS ± 3 PLACE DECIMALS ± 2 PLACE DECIMALS ± 1 PLACE DECIMALS ±	CONT'R NO.	tau-tron
	MATERIAL:	DR Y. Saul 12 MAR 82 CHK T. SEIZER 5 MAY 82 APPD W. LITTLE 5 MAY 82	DRAWING TITLE: SCHEMATIC, TRANSMITTER MOTHER BOARD PCB
D-57053 / 552000 TX		APPROVED	SIZE E / CODE IDENT NO. / DRAWING NO. 57056 / REV D
NEXT ASSY / USED ON		BY DIRECTION OF	
APPLICATION			SCALE NONE / 552000 TX / SHEET 1 OF 1

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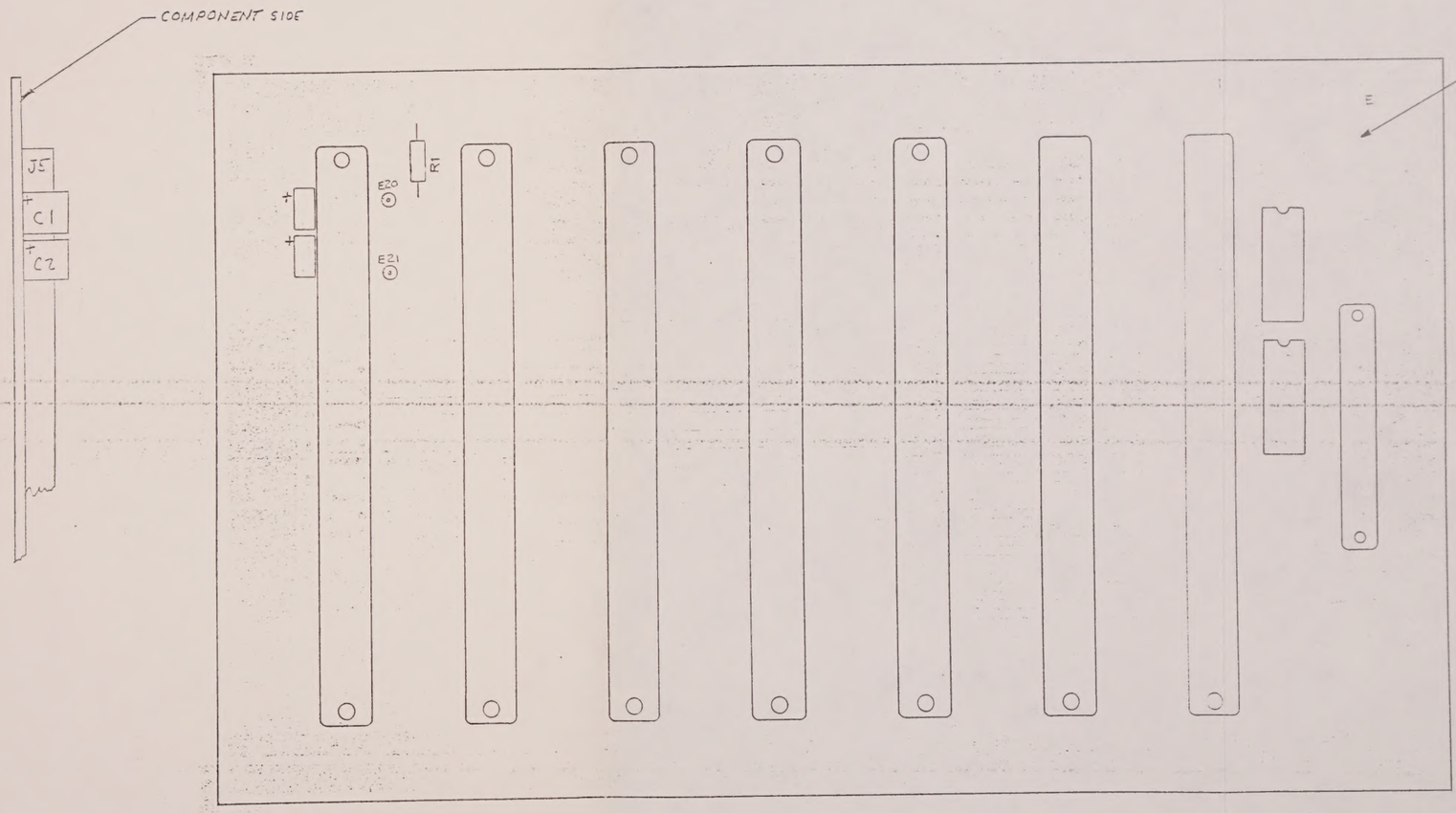
	C	REDRAWN PER ECO# 01123 BMB 5/5/82	5/6/82	
	D	REV PER ECO-1171 RNmod	1-19-82	
	E	REV PER ECO-01253 RR 27 OCT 82	10-28-82	AAM
	F	UPDATED PER DOC ACCURACY PROG ECO # 02197	9/16/85	FK



NOTES:

1. ~~UNLESS OTHERWISE SPECIFIED:~~
   ~~A) RESISTANCE VALUES ARE IN OHMS (MAY BE 5%~~
   ~~B) CAPACITANCE VALUES ARE IN MICROFARADS.~~
2. PLACE A PERMANENT REVISION LEVEL MARK ON THE ASSEMBLY IN THE DESIGNATED AREA.

DED. TOL.

C. SMITH	1-8-81		
B. COOPER	1-12-81	ASSEMBLY	
W. ROLLINS	1-14-81	TX MOTHER BOARD P.C.B.	

57377 S5200E TX
57058 S5200D TX

57058 F

2/1 S5200D TX 1 1

57058

10 Lyberty Way, Westford, MA 01886
(617) 692-5100 Telex 750245 1-800-TAU-TRON (Outside MA)